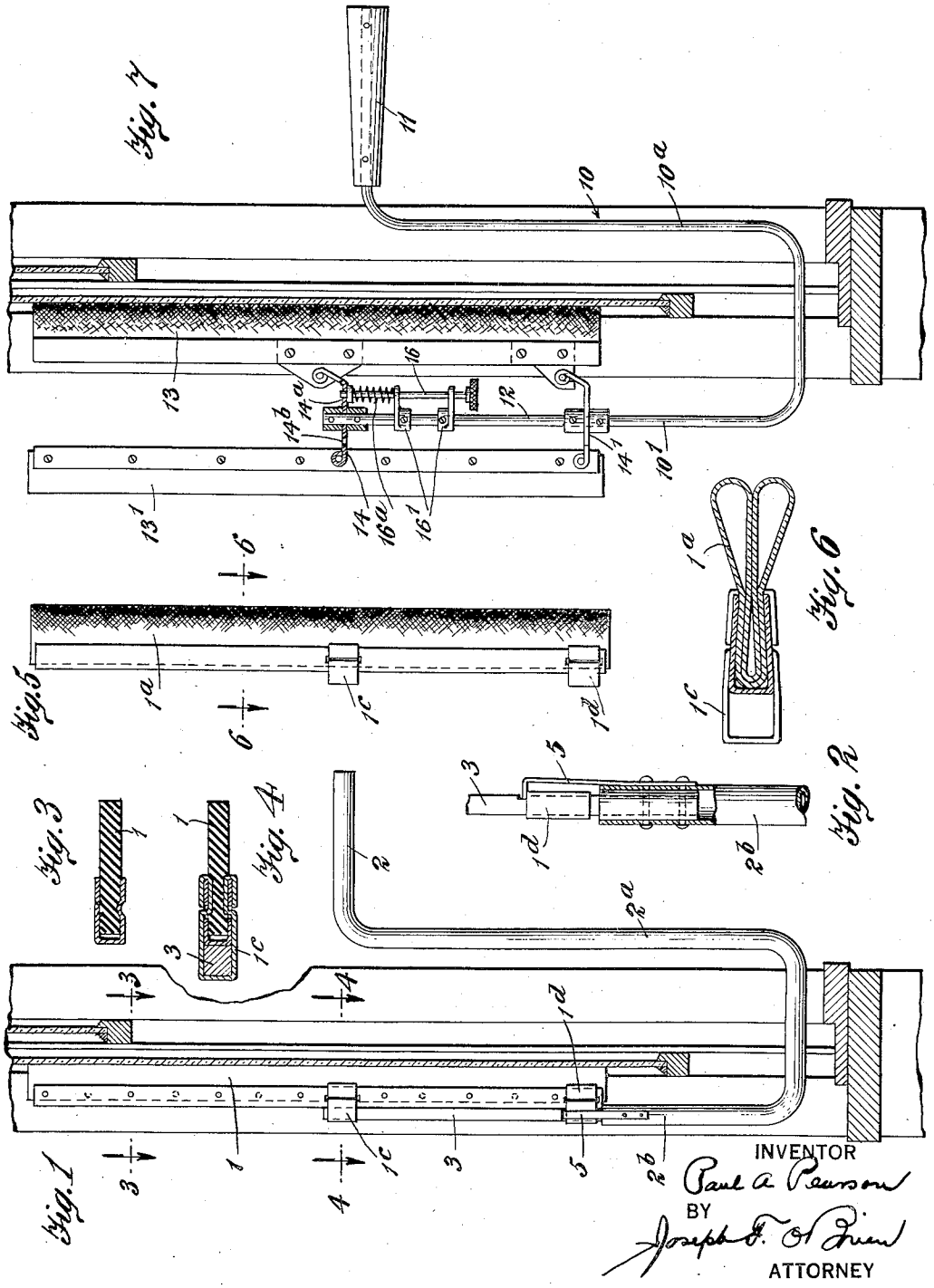
March 3, 1936. P. A. PEARSON 2,032,498

WINDOW CLEANING DEVICE

Filed Dec. 5, 1932 2 Sheets-Sheet 1



INVENTOR

Paul A. Pearson

BY

Joseph F. O'Brien

ATTORNEY

March 3, 1936. P. A. PEARSON 2,032,498

WINDOW CLEANING DEVICE

Filed Dec. 5, 1932 2 Sheets-Sheet 2

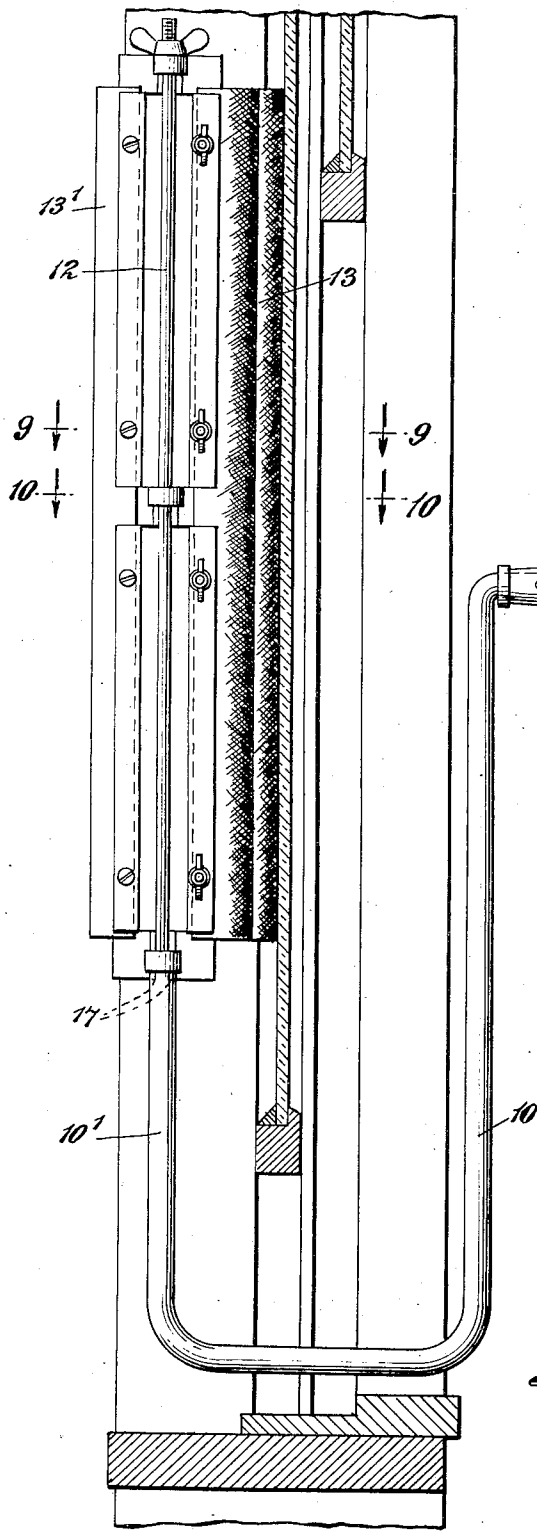


Fig. 8

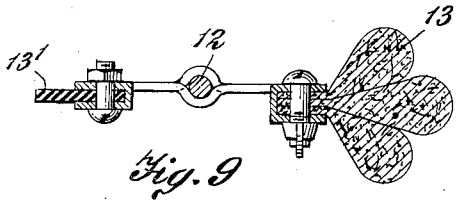


Fig. 9

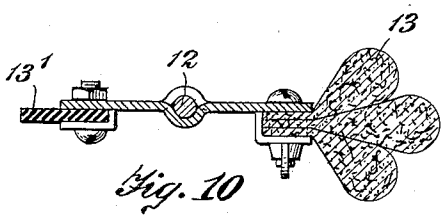


Fig. 10

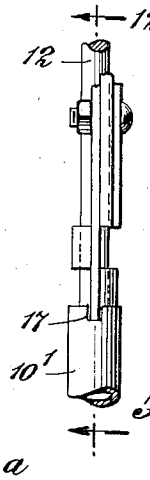


Fig. 11

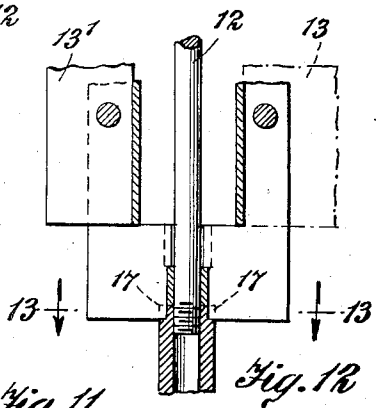


Fig. 12

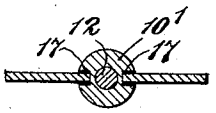


Fig. 13

INVENTOR
Paul A. Pearson
BY
Joseph T. O'Brien
ATTORNEY

Patented Mar. 3, 1936 2,032,498

UNITED STATES PATENT OFFICE

2,032,498

WINDOW CLEANING DEVICE

Paul A. Pearson, New York, N. Y.

Application December 5, 1932, Serial No. 645,644

2 Claims. (Cl. 15—220)

This invention relates to improvements in window-cleaning devices.

One of the objects of this invention is to produce a simple and efficient window-cleaning device which is adapted to permit a user or operator to stand on the inside of a window while applying proper tension to a cleaning element for cleaning the outside thereof.

Another object of my invention is to provide a window-cleaning device by which a large section of the window-pane, as for example, the lower or upper half of the window-pane, may be wetted or squeegeed at one time by a reciprocation of the device from side to side or stile to stile of the sash.

Still another object of my invention is to provide a device of the character described in which an elongated cleaning element is disposed vertically parallel to a handle element and may be moved or traversed horizontally by the operator laterally across the window pane from one stile of the window-sash to the other, and which is thus capable, when reciprocated or traversed horizontally across the lower portion of the window and similarly moved across the upper portion of the window, of covering the entire area of the glass or window-pane.

Still another object of my invention is to provide a device of the character described in which the act of mounting of a window cleaning element will cause the same to be placed in position for use and also to provide means whereby a pair of elements may be readily and quickly interchanged for alternate contact with the window-pane in the cleaning operation.

Still another object of my invention is to provide a cleaning device of the character specified in which the cleaning elements may be readily and quickly mounted and demounted from the handle to enable alternate mounting of such elements and/or independent use of such cleaning elements for employment in cleaning the inside of the window.

With these and other objects in view, the invention comprises the combination of members and arrangement of parts so combined as to coact and co-operate with each other in the performance of the functions and the accomplishment of the results herein contemplated, and comprises in one of its adaptations the species or preferred form illustrated in the accompanying drawings, in which:—

Fig. 1 is a vertical section of a window showing, in side elevation, a squeegee cleaning element of my window-cleaning device applied to the outside of a window-pane;

Fig. 2 is an enlarged fragmentary view of the connection between the extension handle member and the mounting shaft and the means for fastening the cleaning element;

Fig. 3 is a section on the line 3—3 of Fig. 1 looking in the direction of the arrows;

Fig. 4 is a section on the line 4—4 of Fig. 1 looking in the direction of the arrows;

Fig. 5 is a view in side elevation of a cleaning element comprising a wetting member demounted from the handle.

Fig. 6 is a section on the line 6—6 of Fig. 5 looking in the direction of the arrows;

Fig. 7 is a vertical section of a window showing in side elevation a modified form of window-cleaning device embodying my invention.

Fig. 8 is a view similar to Fig. 7 of another modified form of device embodying my invention;

Fig. 9 is a section on the line 9—9 of Fig. 8 looking in the direction of the arrows;

Fig. 10 is a section on the line 10—10 of Fig. 8 looking in the direction of the arrows;

Fig. 11 is an enlarged fragmentary view of the mounting connection between the cleaning elements and the handle;

Fig. 12 is a section on the line 12—12 of Fig. 11 looking in the direction of the arrows;

Fig. 13 is a section on the line 13—13 of Fig. 12 looking in the direction of the arrows.

Referring now particularly to Figs. 1 to 6 of these drawings, 1—1^a indicate elongated cleaning elements adapted to contact with a window-pane in vertical position and being of sufficient length to contact with substantially half of said pane in one operation, and 2 indicates an extension handle member comprising parallel bar portions 2^a, 2^b joined at their lower ends by a U-shaped portion, the inner bar portion being arranged to permit application of proper tension to a cleaning element mounted on the outside member. A mounting shaft 3 is fixedly connected to the bar portion 2^b. The cleaning elements are, as shown, provided with a pair of mounting straps 1^c, 1^d, one member of which is located at the lower end and the other at the middle of said elements. The elements thus extend about half their lengths above the shaft and may be readily and quickly mounted and demounted from the mounting shaft 3 so as to permit interchanging or alternate mounting of the members of the pair of cleaning elements as, for example, the squeegee 1 or the wetting member 1^a. As shown, a handle 2 is provided at the end of the portion 2^a and is disposed

at a right angle to said portion and opposite the end of the shaft 3 and the middle of the cleaning elements mounted thereon.

As illustrated in said Figs. 1 to 6, the said mounting shaft 3 is of square configuration and each of the cleaning elements 1 and 1a has straps 1c and 1d with square sockets fitting said shaft, whereby these cleaning elements may be slipped over the shaft of square configuration and by the mere act of mounting will be positioned and held in proper parallel alignment with bar portion 2a to prevent rotation thereof.

In operating the device shown in Figs. 1 to 6, the mounting straps of the squeegee 1a for example, is slipped down over the square shaft 3 and is locked in place thereon by a spring pawl or locking member 5 which engages or snaps over the lower strap 1d. When the squeegee cleaning element is thus mounted, the window is partially raised and the end of the device containing such element is extended out of the window and moved to contact with the outer surface in a vertical plane, after which the operator or user moves the cleaning device laterally from side to side or from sash-stile to sash-stile over the outer surface of the window-pane.

Obviously, to clean a window, the dampening cloth member shown in Fig. 5 is used first and the cloth is first wetted with water. Said element is then mounted on the shaft 3, extended outside and then reciprocated over the outer surface of the window pane to thoroughly wet the same after which the device is lowered and taken in, the wetting element removed and the squeegee member similarly mounted in its stead, whereupon the squeezee is likewise reciprocated back and forth to squeeze the water and any dirt carried thereby off the outer surface of the window-pane, and thus to clean the same.

Referring now to the cleaning device shown in Fig. 7, this device also embodies an extension member 10, U-shaped in configuration with parallel bar portions 10', 10a provided at the inner end with a handle 11 and having at its outer end a portion adapted to form a single shaft 12. In this embodiment of my invention, a pair of elongated cleaning members of similar length to those hereinabove specified and comprising a wetting member 13 and a squeegee member 13' are connected together by bearing or mounting elements 14—14', one disposed at the middle of the elements and the other at the lower end thereof, and these bearing elements are swivelled on the shaft 12 so as to cause extension of about half their lengths of the cleaning elements above the shaft 12. In this embodiment, suitable means are provided for locking the cleaning elements in alternate positions so as to permit contact thereof with the window-glass and as illustrated, a spring-pressed latch member 16 is mounted in brackets 16'—16' and is normally forced upwardly by the spring 16a to engage alternately in holes or sockets 14a—14b in the upper mounting bracket. The latching rod is provided at its lower end with a knurled head adapted to be engaged by the fingers and to be retracted against the action of the spring to release the cleaning device for swivel or turning movement so that the dampening cloth member and the squeegee member may be alternately moved into operative position.

In Figs. 8 to 13 I have shown another form of my invention which is in all respects similar to the device shown in Fig. 7 except that the squeegee cleaning element and wetting element are mounted upon a single swivelled web or bearing element comprising a single strip of sheet-metal having a portion stamped up therefrom to form bearing straps and having at the outer edges means for mounting at one edge the wetting element and at the opposite edge a squeegee element.

In said embodiment shown in Figs. 8 to 13, the mounting element is adapted at its lower end to fit into grooves 17—17 in the outer terminal end and the upper end of the shaft is provided with a set nut adapted to lock the mounting member to enable positioning of the cleaning element in one of the alternate positions and thus to enable setting in operative position either of the mounting cloth member or of the squeegee member.

Having described my invention, I claim:—

1. A window-cleaning device embodying, in combination, a single piece of rigid material, substantially U-shaped in conformation, with inside and outside legs rigidly spaced from each other and arranged substantially parallel and closely adjacent with each other, a mounting shaft member projecting axially from said outside leg portion, said inside leg portion being provided with a handle for manually applying and distributing pressure through the outside leg and shaft, an elongated cleaning element mounted on said shaft parallel with said leg portions and extending to opposite sides of the position of said handle, said mounting shaft and cleaning element being provided with cooperating means for holding said cleaning element against rotation on said shaft, and with additional cooperating means for locking said cleaning element against longitudinal movement on said shaft, said cleaning element being adapted to be held in manually tensioned relationship on the outer surface of a window pane with pressure equally distributed along the length of the same and to be transversely reciprocated in such manually-tensioned contact with a large portion of the window.

2. A window-cleaning device embodying, in combination, a single piece of material, substantially U-shaped in conformation, with inside and outside legs arranged substantially parallel and closely adjacent with each other, a mounting shaft member projecting axially from said outside leg portion, said inside leg portion being provided with a handle for manually applying and distributing pressure through the outside leg and shaft, an elongated cleaning element mounted on said shaft parallel with said leg portions and extending to opposite sides of the position of said handle, said shaft being of polygonal configuration and said cleaning elements having socketed members with bearings of similar configuration, one disposed at the middle portion of said cleaning element and another at the lower end thereof, said cleaning element having a sliding movement into operative position on said shaft, and a spring-pressed locking dog mounted on said outside leg portion and engageable with the lower bearing member to automatically lock the cleaning element to the bar portion, said cleaning element being adapted to be held in manually tensioned relationship on the outer surface of a window pane with pressure equally distributed along the length of the same and to be transversely reciprocated in such manually-tensioned contact with a large portion of the window.

PAUL A. PEARSON.